	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8
$g1(T)$	0	0	1	1	0	1	0	1
$g2(T)$	0	0	0	1	1	0	1	1
$Y_{g1}(T)$	0	0	4	6	2	4	2	4
$Y_{g2}(T)$	0	0	0	3	3	1	4	3
$Y_T(T)$	0	0	4	9	5	5	6	7

103

101

$$Y_T(T) = \underbrace{4g1(T) + 2g1(T-1)}_{Y_{g1}} + \underbrace{3g2(T) + 1g2(T-2)}_{Y_{g2}}$$

FIG. 1

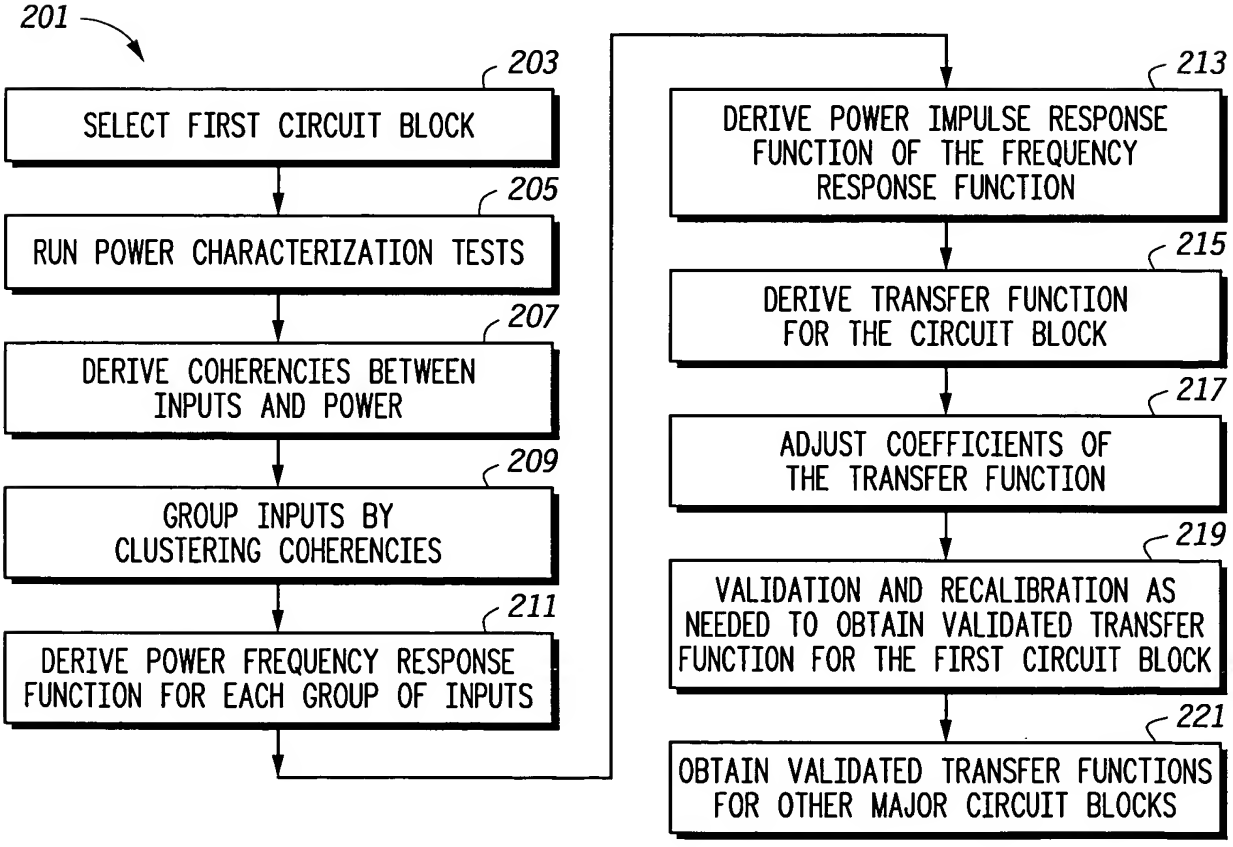

FIG. 2

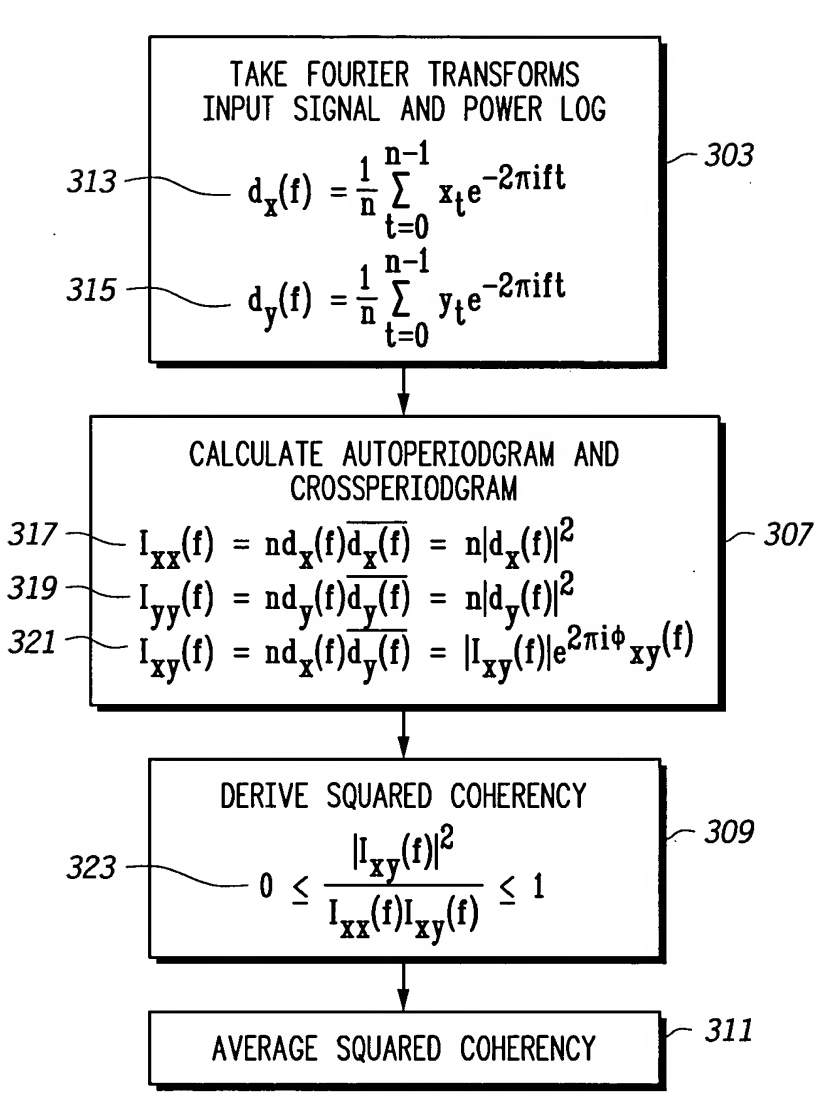
207
TAKE FOURIER TRANSFORMS
INPUT SIGNAL AND POWER LOG
313
$d_x(f) = \frac{1}{n}\sum_{t=0}^{n-1} x_t e^{-2\pi ift}$
315
$d_y(f) = \frac{1}{n}\sum_{t=0}^{n-1} y_t e^{-2\pi ift}$
303
CALCULATE AUTOPERIODGRAM AND
CROSSPERIODGRAM
317
$I_{xx}(f) = nd_x(f)\overline{d_x(f)} = n|d_x(f)|^2$
319
$I_{yy}(f) = nd_y(f)\overline{d_y(f)} = n|d_y(f)|^2$
321
$I_{xy}(f) = nd_x(f)\overline{d_y(f)} = |I_{xy}(f)|e^{2\pi i\phi_{xy}(f)}$
307
DERIVE SQUARED COHERENCY
323
$0 \leq \frac{|I_{xy}(f)|^2}{I_{xx}(f)I_{xy}(f)} \leq 1$
309
AVERAGE SQUARED COHERENCY
311

FIG. 3

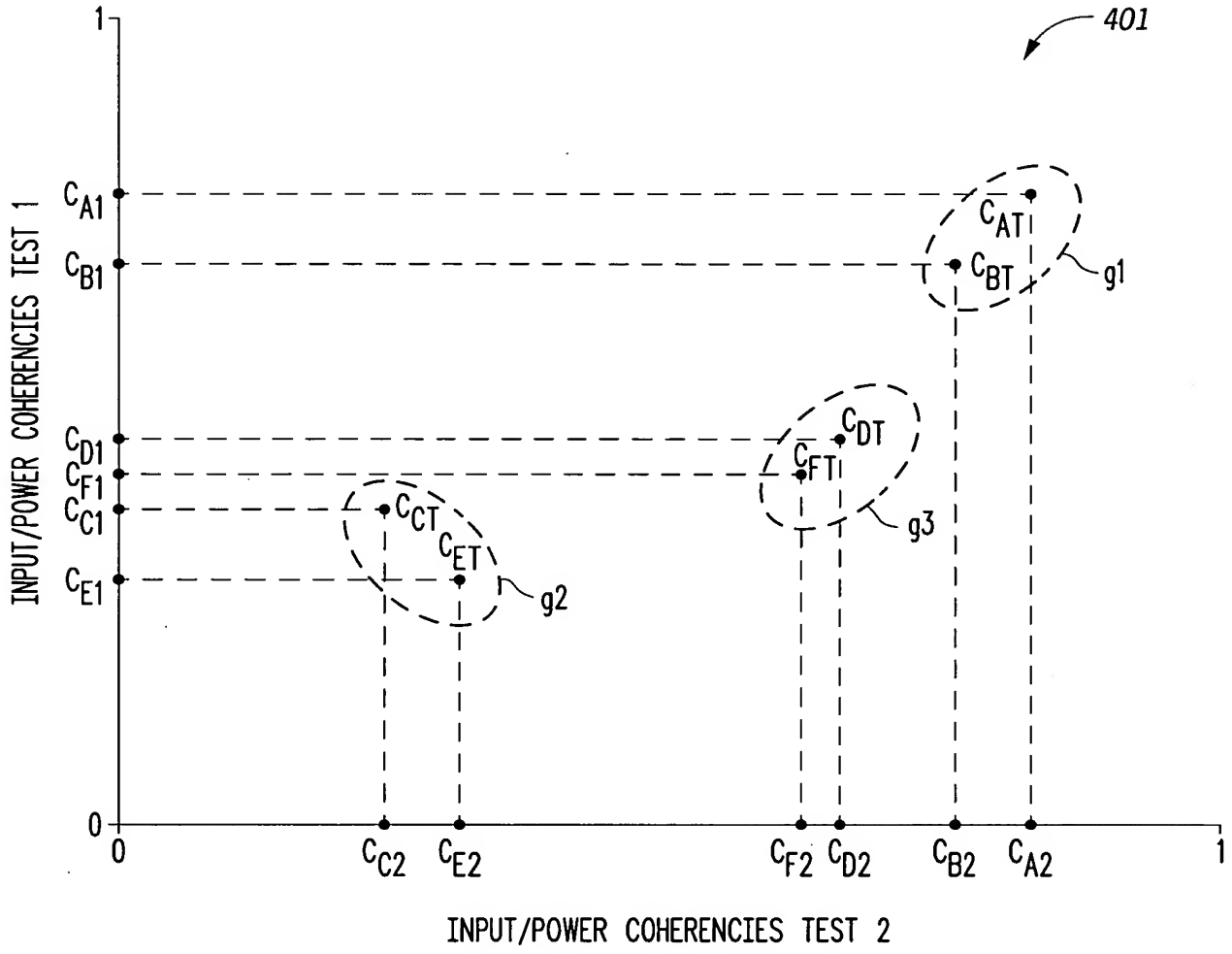
401
1
C_{A1}
C_{B1}
C_{D1}
C_{F1}
C_{C1}
C_{E1}
0
INPUT/POWER COHERENCIES TEST 1
C_{AT}
C_{BT}
g1
C_{DT}
C_{FT}
g3
C_{CT}
C_{ET}
g2
0
C_{C2}
C_{E2}
C_{F2}
C_{D2}
C_{B2}
C_{A2}
1
INPUT/POWER COHERENCIES TEST 2

FIG. 4

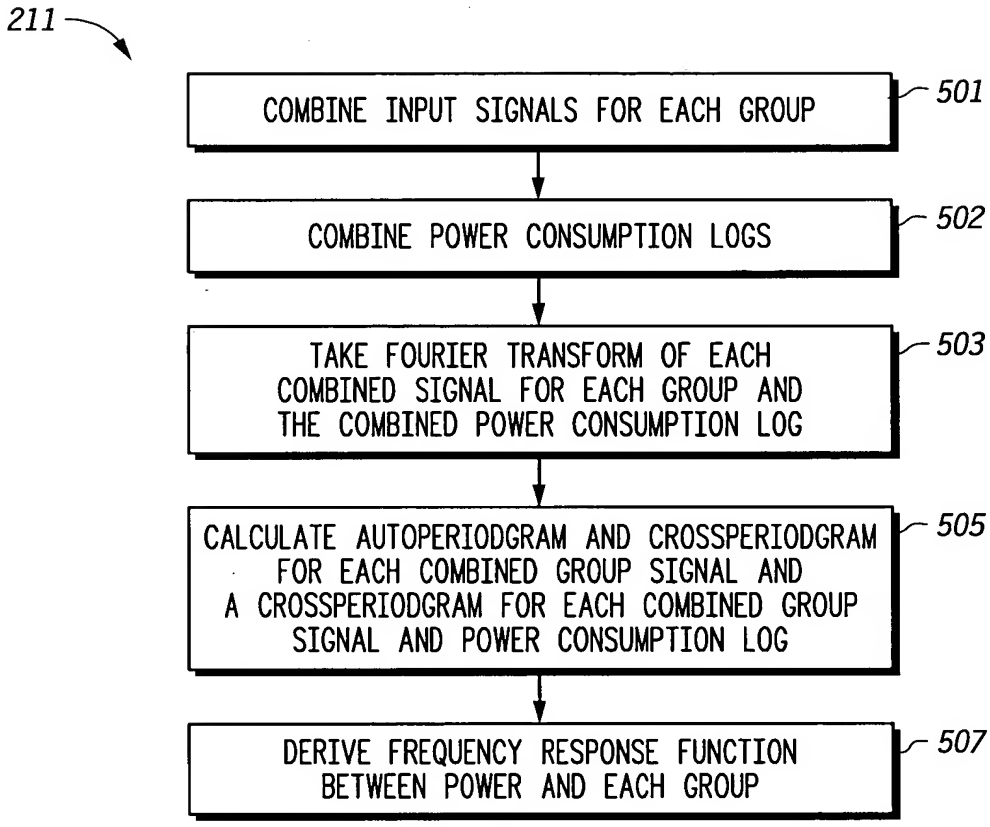

FIG. 5

215

605 $$Y_T = \frac{a}{1 + bB}\, g1 + (c + dB)g2$$

603 $$v_\kappa = \int H(f)e^{2\pi ifk}\, df$$

213

601
$$\begin{cases} I_{x_1y}(f) = H_1(f)I_{x_1x_1}(f) + H_2(f)I_{x_1x_2} + \ldots + H_n(f)I_{x_1x_n} \\ I_{x_2y}(f) = H_1(f)I_{x_2x_1}(f) + H_2(f)I_{x_2x_2} + \ldots + H_n(f)I_{x_2x_n} \\ \vdots \quad \vdots \quad \vdots \quad \vdots \\ I_{x_ny}(f) = H_1(f)I_{x_nx_1}(f) + H_2(f)I_{x_nx_2} + \ldots + H_n(f)I_{x_nx_n} \end{cases}$$

FIG. 6

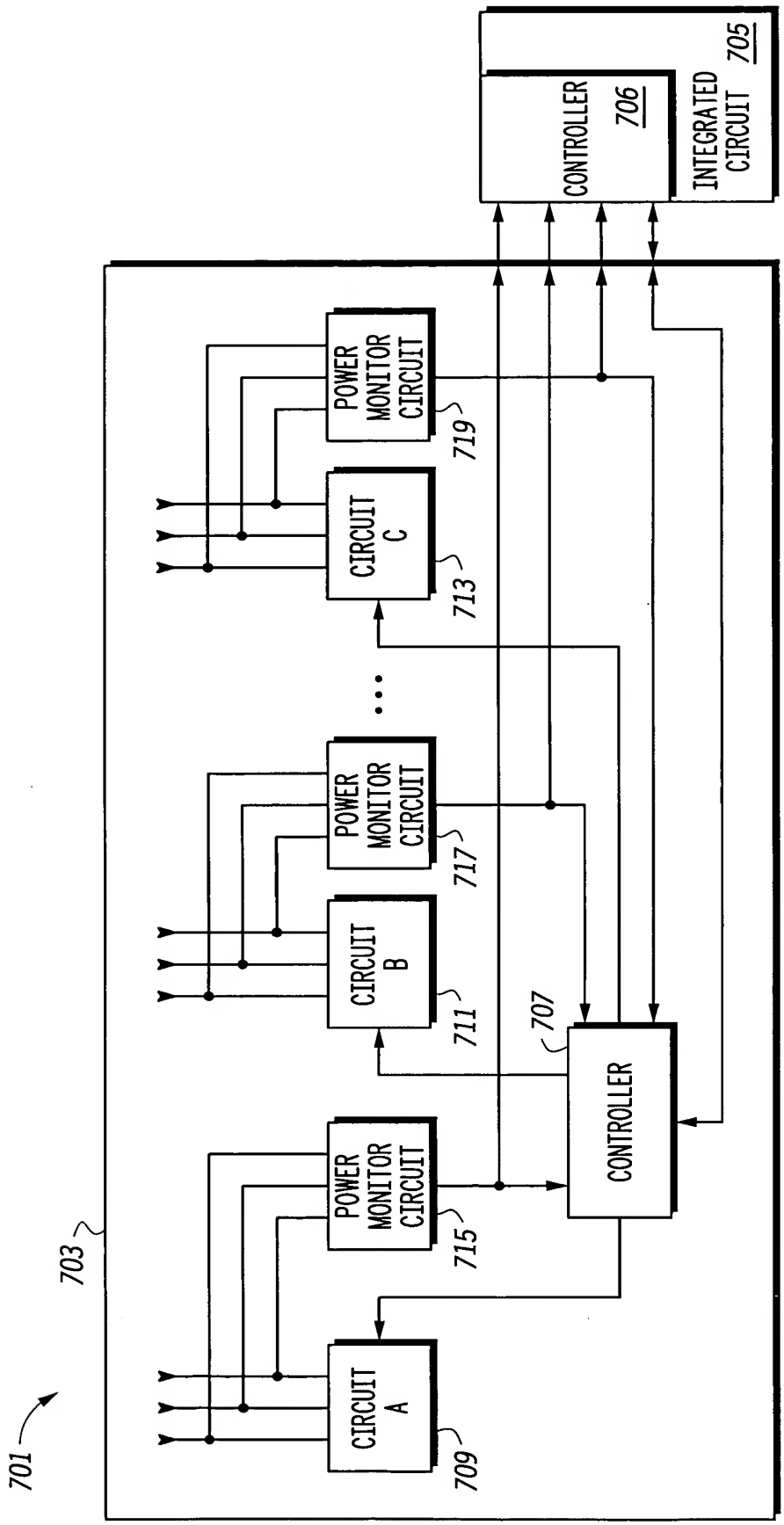
701
703
CIRCUIT A
709
POWER MONITOR CIRCUIT
715
CIRCUIT B
711
POWER MONITOR CIRCUIT
717
CIRCUIT C
713
POWER MONITOR CIRCUIT
719
CONTROLLER
707
CONTROLLER
706
INTEGRATED CIRCUIT
705

FIG. 7